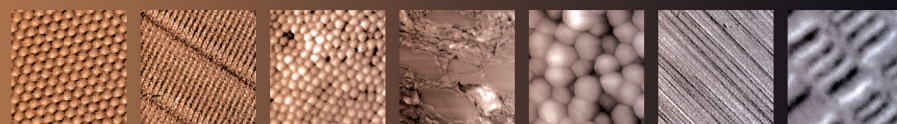


Nanosurf®

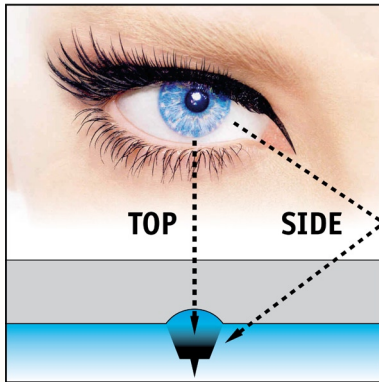
easyScan 2 LiquidAFM



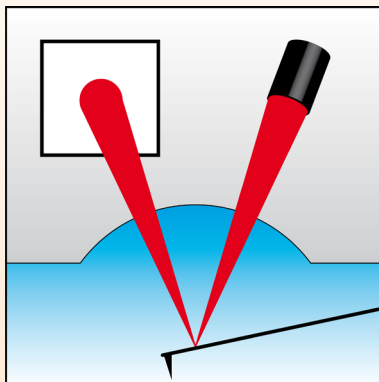
Your Modular AFM System for Nanotechnology and Life Science



Nanosurf easyScan 2 LiquidAFM system



Smart top and side view through the LiquidAFM's optical system allow easy sample viewing and approach. There is no difference in viewing quality between air and liquid. It's that simple!



Nanosurf's patented SureAlign™ technology makes laser-adjustment a thing of the past. Whether measuring in air or in liquid, the AFM laser always hits bull's eye!



Nanosurf easyScan 2 LiquidAFM Key Features:

- **Top and side view in air and liquid**
- **Patented SureAlign™ laser optics inside**
- **Ultra-flat and linear scanning motion**
- **Quick cantilever exchange and sensor cleaning**
- **Easy pipette access to samples on the sample stage**
- **Measure your samples in standard Petri dishes**
- **Support for Lateral Force mode and Dynamic mode in liquid**
- **Three leveling screws and a bubble level for simple leveling, also in stand-alone operation without sample stage**

The LiquidAFM scan head extends the easyScan 2 series to make AFM measurements in liquid simple and accessible to everyone!

Nanosurf's renowned "ease of use" has been implemented consistently in the new LiquidAFM. The result is the easiest Bio-AFM ever!

Laser-adjustment upon immersion of the AFM sensor in liquid was yesterday! The new LiquidAFM scan head with its patented SureAlign™ laser optics eliminates laser-adjustment once and for all.

Our observation optics allow a clear top and side view of the sample in air and liquid.

Accessories:

isoStage...

- Highly compact active vibration isolation system
- Optimized for Nanosurf AFMs
- Fastest setup ever: turn on and go!



easyScope...

- High resolution color camera
- Optimized for easyScan 2 AFMs
- Adjustable axial illumination



Illuminated sample holder...

- Adjustable transmission illumination for transparent samples
- Easy sample positioning and feature detection



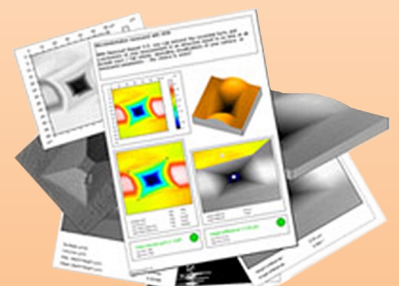
Extended AFM sample kit...

- Ten samples from various disciplines
- Manual and tools included
- No additional preparation tools required



Analysis and Report software...

- Create professional-looking and visually pleasing reports using templates
- Easy automation of the data analysis process and simple template creation
- Particle counting and statistical analysis functions



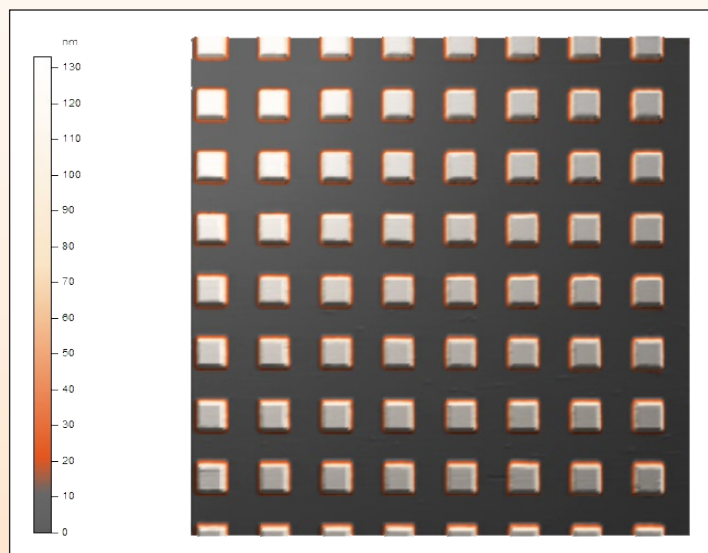
System setup and operation in liquid applications is a breeze. The LiquidAFM scan head was designed to enable direct measurement of samples in Petri dishes or other liquid containers.

A new, unique scanning technology enables metrology-like applications, even in liquid. It is flat, linear, rugged and fast.

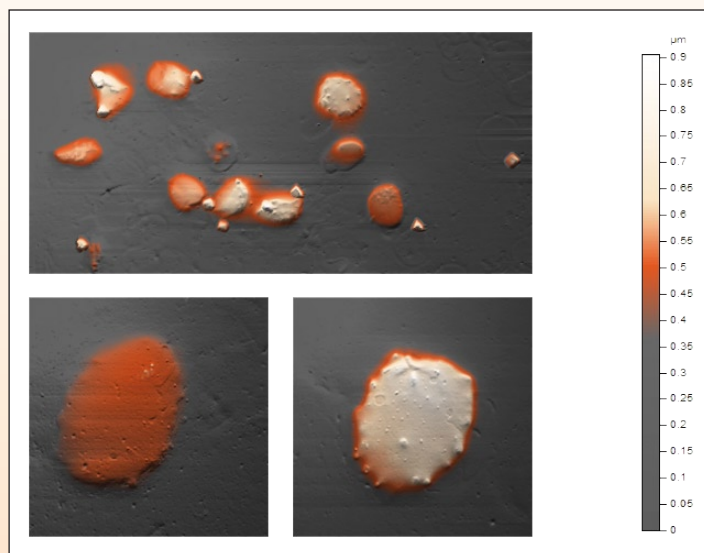
Through its modular setup, the LiquidAFM system remains affordable and individually configurable with all easyScan 2 options and modules.

Features	
General design	Tripod stand-alone, flexure-based electromagnetically actuated XY-scanner
Cantilever alignment	Automatic alignment for cantilevers with alignment grooves. Manual laser adjustment possible for special cantilevers.
Laser adjustment	No laser adjustment required upon immersion of cantilever into liquid because of patented SureAlign™ laser optics
Electrical connection to tip	Available
Sample observation	Top and side view in air and liquid
Sample illumination	White axial illumination for top and side view. Transmission illumination with illuminated sample holder.
Operating modes	Static Force Lateral Force Dynamic Force Phase Contrast MFM / EFM Spreading Resistance Force Modulation Multiple Spectroscopy modes Lithography and Manipulation modes

Specifications	
Sample size	Unlimited without sample stage; 100 mm on sample stage
Maximum Petri dish height (fluid level)	9 mm (6 mm)
Manual approach range	30 mm
Automatic approach range	0.5 mm
Maximum scan range	100 μ m
Maximum Z-range	10 μ m
Drive Z-resolution	0.152 nm
Drive XY-resolution	1.525 nm
XY-linearity mean error	typ. 0.1% (max. 0.3%)
XY-flatness at maximum scan range	typ. 5 nm (max. 15 nm)
Z-measurement noise level (RMS, Static Mode in air)	typ. 0.20 nm
Z-measurement noise level (RMS, Dynamic Mode in air)	typ. 0.16 nm
Scan head dimensions	143 \times 158 \times 53 mm
Scan head weight	1250 g



Calibration grid showing the linearity of the easyScan 2 LiquidAFM scan head. The image was recorded using Dynamic Mode in water. Scan range corresponds to 80 μ m.



Human blood cells adsorbed onto HOPG and imaged under physiological conditions. (Top) Overview image at 100 μ m scan range. (Bottom left) Inset of a single red blood cell at 13 μ m scan range. (Bottom right) Inset of a single white blood cell at 15 μ m scan range. All images were recorded using Dynamic Mode in phosphate buffered saline.



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